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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,777	09/29/2003	Kevin Peck	032631-036	1055

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EXAMINER	
KAPLAN, HAL IRA	

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/671,777	PECK ET AL.	
	Examiner	Art Unit	
	Hal I. Kaplan	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 July 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 10 in Figure 1G (see paragraph 56, line 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 5, 7-10, and 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US patent of Payne (4,634,843) (Payne '843) in view of the US patent of Seitz et al. (6,246,831).

As to claims 1 and 14, Payne, drawn to a dual mode power control arrangement for cooking appliance, discloses, in Figure 5, a circuit to divide an electrical resistive load among a plurality of load elements in parallel, comprising: an electrical power source (L1,L2) for providing electrical power to a plurality of resistive load elements (12,14,16,18), wherein the plurality of load elements (12,14,16,18) are connected in parallel to each other (see column 14, lines 10-15); and a plurality of power splitters (82(A),82(B),82(C),82(D)) for dividing the electrical power source (L1,L2) into separate power subsources such that there is one power splitter and one power subsource for each load element, wherein the sum of the power provided to each of the plurality of

load elements (12,14,16,18) is equal to the power of the electrical power source (see column 14, lines 10-15 and 25-32). Payne does not disclose the power subsources being separate and equal. Seitz, drawn to a fluid heating control system, discloses the supply of power from an electrical power source to separate and equal power subsources (see column 10, lines 45-49). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to control the heating elements of Payne to be driven with equal amounts of power, in order to be able to more easily determine the current being delivered while still maintaining even heating without overloading the circuit.

As to claim 2, the electrical power source of Payne is an AC current at a nominal 120 volts (see column 14, lines 10-13).

As to claims 5 and 16, the plurality of elements of Payne comprise two or more heating elements (see column 4, lines 13-15).

As to claim 7, Payne teaches all of the claimed features, as set forth above, except for the number of resistive load elements being 2. Seitz, drawn to a fluid heating control system, teaches a circuit to divide an electrical load among a plurality of load elements in parallel, wherein the number of load elements is 2 (see column 34, lines 10-19).

As to claim 8, the number of resistive load elements in Payne is more than 2 (see column 4, lines 13-15 and Figure 5).

As to claims 9 and 17, the resistive load elements of Payne are fault tolerant such that if one or more of the resistive load elements fail, the remaining resistive load

elements of the plurality of resistive load elements can continue to operate (see column 14, lines 25-32).

As to claims 10, 13, 15, 18, and 19, the power splitting in Seitz is performed according to an AC time proportional wave form (see column 34, lines 60-64; column 37, line 51 through column 39, line 9; Table 6; and Figures 1, 2, and 8).

As to claim 12, the circuit of Seitz includes an alarm circuit for activating an alarm when one of the components of the circuit becomes out of specification (see column 28, lines 44-51 and column 29, lines 2-21).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne '843 in view of Seitz, and further in view of the US patent of Payne (5,293,028).

As to claim 3, Payne '843 in view of Seitz disclose all of the claimed features, as set forth above, except for the electrical power source being an AC current at a nominal 220 volts. Payne (5,293,028), drawn to a cooktop appliance with improved power control, teaches, in Figure 4, a circuit to divide an electrical resistive load among a plurality of load elements in parallel, wherein the electrical power source is an AC current at a nominal 220 volts (see column 6, lines 16-19). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the circuit of Payne '843 in view of Seitz to run on an AC current at a nominal 220 volts, as taught by Payne (5,293,028), because 220 volts AC is a common mains power supply voltage.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne '843 in view of Seitz, and further in view of the US patent of Belson et al. (6,614,133).

As to claim 4, Payne '843 in view of Seitz disclose all of the claimed features, as

set forth above, except for the electrical power source being a DC current. Belson, drawn to a power system with plural parallel power supplies with at least one power supply in standby mode for energy efficiency, teaches, in Figure 1, a circuit for dividing a DC electrical power source (100) into separate power subsources (104) connected in parallel. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the circuit of Payne '843 in view of Seitz to run on a DC current, as taught by Belson, because many devices and systems with which the circuit will interface run on a DC current.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne '843 in view of Seitz, and further in view of the US patent of Eckert, Jr. et al. (4,377,739).

As to claim 6, Payne '843 in view of Seitz disclose all of the claimed features, as set forth above, except for each of the plurality of power splitters comprising a silicon control rectifier. Eckert, Jr., drawn to an average power control apparatus and method, teaches, in Figure 1, a power splitter comprising a silicon control rectifier for controlling power flow from an AC power source (104) to a heating element (106) (see column 5, lines 23-25 and column 13, lines 33-41). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use silicon control rectifiers (SCRs) appropriately connected, as taught by Eckert, Jr., instead of the triacs, in the circuit of Payne '843 in view of Seitz, because a triac is interchangeable with two appropriately connected SCRs.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne '843 in view of Seitz, and further in view of the US patent of Braun et al. (4,829,159).

As to claim 11, Payne '843 in view of Seitz disclose all of the claimed features, as set forth above, except for the power splitting being performed according to AC phase control. Braun, drawn to a method of optimizing control of plural switched electric loads to reduce switching transients, teaches, in Figures 1 and 2, a circuit to divide an electrical heating load among a plurality of load elements in parallel, wherein the power splitting is performed according to AC phase control (see column 5, lines 43-54 and column 5, line 63 through column 6, line 10). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the circuit of Payne '843 in view of Seitz so that the power splitting is performed according to AC phase control, as taught by Braun, in order to minimize the load variations that the mains is subjected to and therefore allow short clock periods.

Response to Arguments

10. Applicant's arguments, see Remarks, filed July 19, 2006, with respect to the objections and rejection of claims 1-16 under 35 U.S.C. 112, first paragraph, have been fully considered and are persuasive. The objections and rejection of claims 1-16 under 35 U.S.C. 112, first paragraph, have been withdrawn.

11. Applicant's arguments with respect to the rejections of claims 1-16 under 35 U.S.C. 102(b) and 103(a) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

hik

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